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HORTICULTURE.

MASSACHUSETTS HORTICULTURAL SOCIETY.

[The following valuable paper was received too late for insertion in our last.]

SOME REMARKS ON TEMPERATURE CONSIDERED IN RELATION TO VEGETATION AND THE NATURALIZATION OF PLANTS.

The natural distribution of the vegetable kingdom over the face of the globe, as affected by various causes, and chiefly by the temperature of the different countries and continents, is one of the most interesting of all subjects. As the illustrious Von Humboldt has observed, it is "intimately connected with the physical world in general. Upon the predominance of certain families of plants in particular districts, depend the character of the country and the whole face of nature; and the natural congregation of vast masses of vegetation of the same character in particular countries has produced most important effects upon the social state of the people, the nature of their manners, and the degree of developement of the arts of industry."

The difference of vegetation, as exhibited in the torrid, the temperate and the frigid zones, is sufficiently familiar to every one. The equinoctial regions, abounding with their splendid vegetation of lofty Palms, Bread-fruit trees, Plantains and Bananas, laden with huge masses of nourishing food, differ as widely from those portions of the earth lying in the temperate zones, where the vine flourishes in perfection, and the cereal grains furnish the chief means of subsistence to man, as the latter does from the arctic regions, where the grasses and cryptogamic plants still keep up the diminishing scale of vegetable life, and contribute to the support of a higher class of organized beings. It is probable that almost every country produces naturally in its vegetation, sufficient means for the subsistence of man; either directly, as in the torrid and temperate regions through the medium of delicious fruits, esculent roots and seeds, or indirectly, as is partially the case in the temperate and frigid divisions through animal life, which primarily subsisted upon vegetation in some of its forms. But man in a civilized state, especially in those countries where climate forbids nature to lavish her bounties in the greatest profusion, has refused to be satisfied with her supplies, and has delighted his taste and gratified his wishes by assembling around him, as far as possible, the productions of other countries, either to embellish his habitations, or satisfy his appetites. Hence many plants, which were exotics, have become so acclimatised or naturalized, as to afford the principal food of their inhabitants, and the staple productions of their soils. The vine and the fig, which are the boast of France, are not indigenous there. The orange, that produces its beautiful golden fruit in the south of Europe and our own country, is a native of Asia. Some of the commoner grains have followed civilized man in his migrations for such a length of time that it has now become difficult to say which was their native country. This is the case with wheat, millet and buckwheat, and many other grasses which it is supposed are indigenous in the oriental countries. How much *we* are indebted to other climates and other countries for our most valuable necessaries and luxuries in the vegetable kingdom a single thought will convince us. Wheat, rye, and most of the other grains, cotton and rice, the staples of our soil have all been imported here; and our most delicious fruits, owe their origin to other lands. The peach is from Persia, the apricot from Armenia, the cherry from Pontus, and nearly all our finest cultivated varieties of apples, pears, plums, &c. from Europe.

These preliminary remarks lead us to reflect how much the arts of culture are indebted to the property which many plants have, to a certain degree, of becoming naturalized in a country where the variations of temperature differ from those of their own; and it may lead us also to investigate the most successful methods by which such exotics, natives of warmer climates, as may be valuable to us either in an useful or ornamental point of view, may be so naturalized as to be either partially or entirely hardy and able to withstand the severity of our northern winters. That a large proportion of the vegetation of the tropics, can never become acclimatised in regions liable to severe frosts, is evident to every one; but that a number of highly valuable plants, natives of peculiar situations in those countries, and more particularly those of the intermediate parallels of latitude, have been, and may be naturalized here, the history of Agriculture and Horticulture affords ample and abundant proof. Plants of rapid and bulky growth, succulent and tender stems, natives of the warmest districts, can never be for a long time exhibited in a state of vegetation here, except in an artificial temperature: but annual plants and trees and shrubs, with strong woody stems, particularly if natives of elevated tracts, as the sides of mountains and the tops of high table lands, may always be considered as affording probabilities of a capacity for naturalization in a colder region.

A method universally known, and which we are inclined to place foremost among the resources for the naturalization of plants, consists in sowing continually the seeds of the plant under trial, for successive generations and from seeds produced in the country into which the plant is introduced. This, though in many cases, a lengthy and somewhat tedious process, is we believe the same by which the most extensive and valuable naturalizations have been effected heretofore. The more tender fruits, as the peach, cherry, apricot and almond, have doubtless been rendered hardy in this way: each new generation possessing perhaps diminished vigor, but acquiring a more robust and hardy constitution. Although it would have been difficult, perhaps impossible, to have altered the contexture of the original tree if otherwise continued, (whether by cuttings, suckers, or layers) yet by reproduction from seed each generation became a little more capable of withstanding the effects of a low temperature, until the desired result was in a measure, or wholly obtained. It is obvious, however, that the result brought about is not the naturalization of the *original* species of tree or plant, but, as Professor De Candolle justly observes in his "Physiologie Vegetale," of the *improved variety* produced from seed, and which has acquired in its contexture a diminished susceptibility to cold. The effects produced by this method of naturalization, are even more abundantly exemplified in the case of herbaceous and annual plants, than among ligneous trees and shrubs. As an instance of this, we may refer to the common Indian corn, which was undoubtedly originally a native of South America and the southern parts of this continent, but of which so many varieties have been produced by cultivation, that it may be said some particular one can be found naturalized and adapted to any parallel of latitude, from the equator to the 45°, and in Europe to the 55° of latitude.* This is often produced in annual plants, not so much by rendering the plant itself less sensible to cold, for in many cases this is scarcely at all effected, as by producing improved varieties, which shall ripen their seed and come to maturity in a cold climate, in half or even a fourth of the time necessary for that purpose, in the country where the species is originally a native. Thus the rice, so important an article of food to the natives of the East, was probably first cultivated in Ceylon and Java, whence it spread all over India, Japan and the southern provinces of China, and the United States. It has also been introduced into Italy, Spain and the south of France, and we perceive that lately an improved variety has been found sufficiently hardy, to produce abundant crops in the comparatively cold climates of Hungary and Westphalia. Rice may now therefore be considered naturalized as far north as the 46° in the old world. The luscious fruit of the melon and the cooling one of the cucumber, can scarcely be brought to maturity if the seeds are direct from the more southern climates where they are natives, but improved varieties have sprung up by culture, so perfectly naturalized as to produce abundant crops in almost every part of the United States. The horticulturist should never therefore reject even an annual plant, which will not come to maturity immediately without artificial aid in our climate, but if the subject is worthy of the pains, he should endeavor, by the aid of artificial shelter if necessary, to procure the seed and sow it under the most favorable circumstances during several successive generations, when it will probably at last produce him a variety which will withstand the severity of the climate, or come to maturity sufficiently early to escape the destructive effects

* Cobbett's Corn, which he brought to maturity in the short and cool summer of England, is, we believe, a very early variety from Canada.

of too great an abasement of temperature.* — Considered in this light the green-house may become one of the most useful, as well as ornamental and pleasing sources of enjoyment to the experimental horticulturist and the public generally.

We must not leave this part of the subject, without adverting to the advantages which may be obtained by artificial fecundations and impregnations, of highly ornamental or useful exotic plants, with more hardy species or varieties of the same genus; the produce of which may be highly superior varieties, having all the beauty or excellence of the tender species, and perhaps nearly the same robustness of constitution as the hardy one. We conceive it to be a method, by which, now that artificial hybridizing is so well understood, the most valuable results may in many instances be produced in a comparatively short space of time.

The choice of situation and aspect is another important consideration in the naturalization of plants. We never place a plant of a delicate nature in aspects exposed to the utmost inclemencies of the weather — in situations open to the fury of the coldest winds, or the raging of the most boisterous storms. We naturally seek on the contrary to place them in a sheltered situation, in an aspect favorably disposed to catch the genial rays of the sun in summer, and to prolong as much as possible the duration of that favorable season. Hence the use of walls and trellises, and the choice of particular aspects best calculated to favor the object in view. In England, many fruits require a wall, to come to maturity, which ripen perfectly with us as standards, and although walls are as yet but little used here, we can easily imagine that many partially tender trees and shrubs, might be brought to perfection upon them which the inclemency of our winters forbids us to cultivate in the open air.

Apart from shelters of this description, the character of the soil and situation, demands the utmost attention. Soils that are of a cold, clayey and heavy texture, particularly if they retain water, are totally unfit for the growth of tender plants. They should be planted in a light, friable and porous soil, as dry as the peculiar constitution of the plant will admit, for not only is a wet soil more liable to be deeply frozen, but also the exposed parts of the plants which grow in it. Even hardy and naturalized trees are often severely affected by the cold in a soil saturated with moisture. The philosophy of this is well known to every physiologist. In moist soils, the plant is surcharged with watery fluid, the annual depositions of wood are large, but not firm and well calculated to resist the intensity of cold; the leaves are longer completing their articulations with the stem, and as a consequence of this the young shoots are continued longer in a growing state, and remain succulent and unripened at the approach of winter, when the first severe frost destroys their vitality. Beside these facts, it is well known that water (and the sap of plants in its primary state is but little more) is a better conductor of heat and cold, than either the woody fibre of trees, or the particles of air which occupy in some measure the place of watery fluid, in a well ripened branch. Susceptibility to injure by frost in ligneous plants, is therefore increased with the presence of watery fluid, and diminished by the presence of firm well ripened annual layers of wood. A knowledge of this fact is of the greatest importance to the agriculturist, in the selection of soils and situations for crops which are but imperfectly naturalized. We may illustrate this by remarking, that plantations of the Chinese Mulberry, (*Morus Multicaulis*, a tree that is justly exciting the greatest attention in this country, and which deserves every effort at complete naturalization,) which were situated upon dry gravelly soils, even if in cold aspects, withstood almost perfectly the extreme rigors of the last winter in the Eastern States, when extensive fields of the same tree, in moist soils, were entirely cut down to the ground in a great majority of instances.

In Europe, the advantages of a dry soil for the naturalization of plants are well known, both theoretically and practically, and many plants that formerly required the protection of a green-house, are by the proper choice of dry and porous soils, innured to the severity of ordinary winters. So well is this subject understood in England and France, that Camellias and Oranges have in favorable situations been quite naturalized. In the latter country it is quite remarkable how many comparatively tender exotics, generally protected in green-houses, are preserved perfectly in large barn-like buildings, without the aid of fire, during the whole winter. "The secret of this," Loudon observes, "lies in the dryness of the air of France, and in the gardener having previously *by withholding water, matured the growth of the leaves and ripened the wood;* in short in his having reduced the plants to a dormant state before housing them." In cases where it is desirable that the utmost pains should be taken, as in the case of new and rare shrubs, creepers, &c. the gardener will facilitate the object in view by trenching the soil and artificially producing a dry subsoil by underlaying the surface mould with a strata of stones or very coarse gravel: thereby checking too vigorous a growth, causing a small but firm annual deposit of wood, and placing the vegetable in a state of rest long before the winter frosts commence.

A variation of this mode of naturalizing, consists in placing many tender kinds of herbaceous plants, and small shrubs upon dry rock-work or aggregations of stones mingled with soil, where they are found to thrive perfectly. We observed in the Botanic Garden at Cambridge, Mass. an *Azalea indica*, and a species of *Erica*, that had braved the exceedingly low temperature of nearly 30 deg. [Fah.] below zero, the past winter, having been planted for several years previous in a mass of rock-work, where they had annually matured their wood in the most perfect manner. Those persons who are acquainted with the comparative delicacy of these plants, in a climate so cold as that of Massachusetts, will appreciate at once how thoroughly they had become naturalized by this simple process.

Naturalization by external protection, next deserves our attention. It is a common practice to protect many shrubs and trees with a covering of straw or mats at the approach of winter, during their young state, knowing that as they become stronger and more bulky in size, they will also acquire additional hardihood. This is an effectual practice in its way, and we believe that considered as an auxiliary in naturalizations, some useful hints may be gathered in relation to it from recent discoveries made in the physiology of plants. It was formerly the opinion of some *savans*, among others Hunter, Schœpf and Salome, that vegetables having a circulating system of fluids and a sort of respiration analagous to those of animals, ought to have therefore, and had, a property of developing a certain quantity of caloric or heat within themselves. Recent experiments, however, made by Schutzer and Halder, and more latterly by Dr Goeppert,* of the Botanic Garden, of Breslau, seems to have proved, that "vegetables appear to retain a certain medium temperature, which can not however be considered as originating from heat evolved by the functions of the plant, but can be satisfactorily explained by a reference to the *bad conducting power* of the vegetable fibre, and the wood by which the temperature of the surrounding ærial strata, penetrates but slowly into the interior of the plant."† What we would wish to deduce directly from this, is that many woody plants on which it is proposed to try acclimatising experiments by external protection, might in many instances with more chance of success, be reared under shelter *until they attained considerable thickness of stem* and induration of wood, when they would from their increased non-conducting capacity, be much better able to withstand the cold, if protected a few seasons, than the same species, if reared from infancy in the open air. As an illustration of the advantages which size and diameter of stem give to tender trees in withstanding rigorous cold, we may mention that we saw in the nurseries at Philadelphia the following trees, viz.: *Acacia julibrissin*, *Pinckneya pubens*, *Magnolia grandiflora*, and *G. eliptica*, *Gordonia pubescens*, &c., of some twenty or more years growth, that had survived uninjured during the past winter (unparalleled for depression of temperature for fifty years past), the extraordinary low temperature of 12 deg. or more below the zero of Fah., or 44 deg. below the freezing point. That this was owing in a great measure to their having become naturalized in that locality, there can be no doubt. But the ordinary lowest temperature of Philadelphia is some 20 or 25 deg. above that of the last winter, and we conceived that these trees survived so perfectly the increase of cold only by virtue of their large size, thickness of bark and wood, and the consequent thickness of non-conducting substance, to protect the juices of the plant and the vital organs from the effects of frost.

The simplest and perhaps most effectual method of preserving plants by external protection, is to be found in the well known practice of enveloping either the whole or a portion of the stem and branches with a covering of dry straw, pieces of Russia matting, or moss and hay, firmly bound with straw ropes. For small plants, boxes or empty casks, with a light in the top, (or which is preferable in the north side,) are often used. The branches of evergreen trees, as the pine, hemlock and spruce, where they can be procured, are excellent materials for this purpose. It is, we believe, customary in some parts of France where the fig is extensively cultivated, to bend the

*As a proof of the effects of a renewed reproduction from seed, we may mention that we planted the present season in a favorable situation a quantity of seed of the Lima bean, direct from its native country, lat. 14 deg. S. — the plants produced, however scarcely attained the period of flowering before they were destroyed by the frost, whilst the plants in their immediate neighborhood, the produce of a variety of the same bean, naturalized in the country, yielded as usual abundant crops of matured seed.

* *Uber die Wærme-Entwicken lung in den Pflanzen*, &c, Breslau, 1830.

† Jameson's *Philosophical Journal*.

branches down to the earth every autumn and cover them with a thin layer of soil: in this way the fig, though a tender tree, can be cultivated to a great extent in the northern districts.

We strongly suspect after all that has been said of protection externally against the influence of cold, that the evil effects which plants suffer, arise not so much from the *congelation* of the exposed parts of vegetables, as the *rapid and hasty thawing* to which they are often exposed in this climate by the sudden influence of the sun after continued cold. Who has not witnessed some tender tree on the north side of a wall, some few herbaceous plants in the shade of a hedge or fence, or even the grass in the northern exposure, preserving their greenness and vitality through the chilly season of winter, when their equally tender neighbors exposed to the sun, have suffered severely, and even perished entirely? The cause of all this is, probably, that the sudden glancing of the warm sun upon the frozen branches, leaves, or roots of the tender vegetable, *causes a sudden dilation in the crystals of ice* that are formed in those parts, which, consequently, in their expansion distend and rupture the spiral vessels, and other parts filled with semi-fluid matter, and destroys those organs of the plant necessary to its vitality; in short something takes place analagous in its effects, to the bursting of the blood-vessels in the animal system. This is very striking in the splitting of the stems of large trees that occasionally happens in cold climates, and is often attended with a loud noise.

In all northern countries where the earth receives an annual coating of snow, the husbandman is well aware how beneficial to his fields is this protecting mantle of nature — so much so that in this country it is a common saying among farmers, that a covering of snow is equal in its beneficial effects to a coat of manure. The benefits in many cases are not exaggerated, for the snow not only prevents the loss of the internal heat of the earth by radiation and thus protects vegetation upon its surface, but it has also a powerful influence in shielding the exposed parts of plants from the alternations of freezing and thawing, and the injury they would receive from the sudden action of the sun when in a frozen state. The results are not less beneficial upon a smaller scale to the horticulturist, while it affords him also a hint of the efficacy of slight coverings over plants near the surface of the earth, as in this manner many of the herbaceous and stemless plants of the south may be preserved in security during our winters.* We should not forget to mention in this brief essay, the idea first put in practice we think by the enlightened M. Soulange Bodin, of the Horticultural Institute near Paris, of attempting naturalizations by grafting partially tender species of plants, upon hardy species of the same or a kindred genus, able to withstand the effects of cold.† The success of his experiments at the time the results were made known was flattering. His method was to graft upon large robust stocks, at some considerable distance from the ground, availing himself thereby of the protecting properties of the stock, and of the power which he conceived it to possess of maintaining its temperature, by the communication which its deep roots had with the warmer soil. We believe this mode of naturalization might be very effectual south of the Potomac, where the soil is never very deeply frozen, in acclimating trees and shrubs of still warmer climates, and we recommend it to the article of the horticulturist in all cases where practicable in this region.*

It is proper to remark here, that persons about to make experiments in naturalizing plants, should when they choose a locality endeavor to avoid all low valleys, especially if abounding with springs or streams of water, as the most unfavorable of all situations for the attainment of the object in view, on account of their being more subject to early and late frosts in autumn and spring, and to intense congelation in the depths of winter. Extensive slopes, however, by the sides of large rivers and other bodies of water, are excellent sites for the purpose. Some of our large inland lakes, those immense bodies of water which are rarely frozen over, have an astonishing influence in ameliorating the severity of the winters in their neighborhoods, and many tender trees and plants might be naturalized in their vicinity, and thus become adapted through their progeny to much colder situations.

Such are the principal facts already known, which should claim the attention of all persons whom pleasure or interest may induce to attempt the naturalization of plants in this country. Although it is a practice which has hitherto proceeded nearly at random, and has been rather the amusement of the amateur cultivator, than an object of careful attention, we are persuaded that with a portion of the assiduity directed toward it that the other branches of horticultural science have received, it may become the means not only of a great increase of gratification to the horticulturist, in the acquisition which the garden will receive of beautiful and valuable flowering trees, shrubs and vegetables, but also that it may to a certain degree be productive of very considerable advantages to the agriculture of our country.— The United States embrace almost every desirable variety of climate, and we believe that in time the greater majority of useful and beautiful productions of the vegetable kingdom, may be successfully produced in our own territory. We confidently anticipate the period when the vine and the silk culture shall be carried to maturity in the extreme northern portions of our country, as the olive, the cocoa, palm, the plantain and bananna, the cochineal-cactus, and even the tea plant, will in time, undoubtedly, flourish in perfection in the southern portions of it. With so extensive a range of climates, the field for experiments is equally extensive, — varieties of the different productions may be originated, suitable for numerous localities and latitudes; and soils and situations may be chosen, best adapted to the naturalization and cultivation of the different plants. Nature has already furnished us with the most extensive variety of vegetation, to be found in any temperate region, and it is only necessary for art to second her intentions and our country may boast of all that is most delightful and gratifying to man among the products of the soil.

In the mean time we look to our horticultural and agricultural societies, composed as they are of the learned, scientific and practical portion of the community who are devoted to these subjects, for the increase and dissemination of information relating to them, — for the report of such experiments and facts as have already been made and ascertained, and the encouragement of new and more extensive trials and experiments in the different sections, soils and climates of our fertile and highly diversified country.

A. J. Downing.

Botanic Garden and Nursery,
Newburgh, N. Y., Dec. 10th, 1835.

[Extract from Gov. Dunlap's Inaugural Address, January, 1836.

AGRICULTURE IN MAINE.

Agriculture lies at the foundation of all national wealth and strength — it is the parent of manufactures, the nurse of commerce, and the staff upon which all the arts and sciences lean for support. To encourage this necessary and advantageous pursuit of the citizen, by every provision calculated to elevate its character and extend its influence, is the obvious duty of the legislator and patriot at all times, and in every government. In our own State particularly, where so vast an extent of territory, well adapted to the purposes of the husbandman, lies unoccupied and unimproved, much may be done towards the increase of agricultural resources, by a liberal policy in legislation. To the actual settler, every facility which does not involve a positive expense to the public Treasury, ought to be extended. An abundant recompense for it will be found in the acquisition which it will secure to the population, and consequently to the aggregate wealth of the State.

An enlargement of the existing number of Agriculturists within a State, is also the most effectual method of preparing in time of peace for the exigencies of a state of war, a principle which enters into the policy of every prudent administration of Government. In all ages, and in all countries in which civilization has made any progress, men identified with the soil, and having an actual interest in its riches and its resources, have invariably been found among the ablest in its defence. Various considerations combine to awaken in them a fervor of patriotism, and to induce a sincerity of purpose, which do not operate upon citizens, whose attachment to the soil is founded only in accidental or transitory circumstances.

Believing this subject to be of great and increasing importance to the prosperity of our State, it will give me pleasure, gentlemen, to co-operate with you in any course of measures which your wisdom may devise for its direct encouragement, and I cannot forbear to invite the exercise of the utmost liberality on your part, that may be thought consistent with your power as legislators.

A foundation may be laid for great increase of wealth in our State, by disseminating practical information upon the subject of cultivating the mulberry tree and the raising of silkworms for the manufacture of silk. It cannot be doubted, that for these purposes, numerous advantages are possessed by our citizens. And in view of what is doing in other States of the Union in this important and growing branch of manufactures, it must be worthy of your consideration, whether through public munificence though exercised upon a comparatively limited scale, an impulse may not

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* A great number of the beautiful varieties of China Roses, Carnations, &c. may be preserved in this way by slight coverings of straw, even in the cold climate of Canada.

† Annales de Fromont, tome iv. p. 309.

* We observe the Messrs Prince and Sons advertise trees of the Morus Multicaulis grafted upon the White Mulberry, which they state to be hardier than if upon their own roots.

be given to individual enterprize upon this subject that will redound hereafter to your own honor as provident guardians of the public good, and to the incalculable benefit of the State at large.

The cultivation of Hemp is another branch of agricultural industry, which is commended to your consideration, as highly worthy of additional encouragement by the State. It is a product adapted to our soil and climate, to a degree unappreciated as yet, perhaps, by a majority of those who are immediately interested in its improvement. It is of a nature to resist successfully the droughts and frosts, that so seriously affect many other vegetable productions on which the husbandman in this State has been accustomed to rely, as the principal reward of his industry. A practical illustration of the numerous advantages to be secured by the cultivation of Hemp, would be of direct value to the public as well as most satisfactory to the agriculturist. This may probably be attained to the full extent desired, by the institution of a limited system of bounties to the cultivator.

FACTS AND OBSERVATIONS RELATIVE TO THE CULTURE OF SILK.

Extracts from "*Notes on the Growth and Manufacture of Silk in the United States.*" By M. Genet, formery Embassador from France to the United Statles.

"It is a matter of fact that the planting and attending to mulberry trees, either in orchards or hedges is the hardest part of the silk culture; and that the rest of the process, which occupies only the fifty or sixty days to which the life of the silk worm is limited, may be conducted by females, children, and old or invalid men, unable to perform hard labor on any farm or plantation, and will accordingly offer a new gain without impairing the other sources of income. It is proper for legislators to consider, that the more the science of mechanics, applied to manufactures substitutes machines for manual labor, the more it is useful to supply the females of our country, whose number is everywhere superior to the number of men with the means of supporting themselves, or the families that support them, and that no occupation besides the spinning of flax, and its manufactures, not yet entirely conquered by mechanics, seems to be better calculated to employ the time of that supernumerary part of the population than the culture of silk.

"It will certainly be a great while before a sufficient quantity of silk can be raised in the United States to become an article of exportation, or to supply even the few silk manufactures of our own country, which now import the whole of their materials. But, if the Italians, who first cultivated the silk worms in the year 1455, from seeds brought with a great deal of trouble and care to Rome, by two missionary Monks returned from the East Indies, had been indifferent about the domestic growth of silk, valued at that time almost as much as gold; and if the French, the English, and all other European nations who have acquired wealth by the culture of that article had not by bounties and rewards promoted at first its introduction, and afterwards protected its extension by various laws, no other silks, to this day, would be worn, but those imported from China and the East Indies. Comparatively speaking, we are now in America, in reference to silk, several centuries behind the other manufacturing nations. That commodity, whether we import it from India, China, or Europe, is for us an immense absorbent of our substance, and the sooner we prepare the means of stopping, effectually, that drain through which a great quantity of bullion escapes from the vaults of our banks, the better it will be for the progress of our wealth and prosperity at home.

"The growth of raw silk in a merchantable state, requires hardly any capital, and it occupies but very little land and very little room.

"An ounce of seed of the silk worm will produce 40,000 worms that will consume one thousand pounds of white mulberry leaves, easily supplied by fifty grown trees, or two hundred small ones, between two and three years old, from the seed or from the slips; and the produce in silk will be upon an average, twelve pounds of drawn raw silk, allowing all contingencies.

"A small hedge that will occupy the twentieth part of an acre, being planted with bushes not more than three years old, as aforesaid, will supply and accommodate 100,000 worms, the produce of which will be thirty pounds of raw drawn silk, and if the whole acre is planted in the same way, the produce will be six hundred pounds; which merely spun into sewing silk, would amount, at the present price of American sewing silk in Albany, to three dollars per pound, sixty feet to the skein, and one dollar and fifty cents per thirty feet.

"If the worms are housed instead of being raised in the open air it is reckoned that a square foot will contain, with ease, one hundred and ten worms in their maturity; accordingly a shelf twenty feet long and three broad, will contain 6,600 worms, its surface being equal to sixty feet, and a set of such shelves will accommodate the 40,000 worms, produced by a single ounce of seed. These sets of shelves may be multipled in the same room, observing only to leave three feet opening between them, in order to enable the attendants to nurse the worms. Besides such a a room, in which several millions of worms may be raised, it is sufficient to have an adjacent room or hovel to put the worms into when they want to make them ball and spin their silk; so that two rooms will be sufficient to spin an immense quantity of silk.

QUALITY OF MULBERRY LEAVES.

The Abbe Rozier, a celebrated French writer in a work entitled "Cours Complet d'Agriculture," in treating of the mulberry, &c., observes that "The quality of the leaves of the mulberry is affected by various circumstances. 1. The age of the plants. The leaves of a young tree are more watery, the juices less concentrated than in an old one.

The exposure has also great effect. Trees planted in a northern exposure or aspect are always below modiocrity, or inferior in quality; the juices are too watery, and the worms do not thrive so well on them. Those raised on hill sides with southern exposure are preferable to those grown on plains.

"The berries gathered for seed cannot be *too ripe*. When they are just barely fit for eating, not more than fourteen per cent. will vegetate. When fully ripe and ready to fall more than half the seed have usually grown; if left till dry, nearly all have succeeded. The mode of obtaining the seed is to dry the berries, and when wanted, to rub out the seed, and fan away the dried pulp."

As to the time of sowing: In the most southern parts of France they sow as soon as the seed is ripe, but the most usual course is to sow the following spring. In France, according to the climate of different provinces, in February, March, and April. In New England we cannot sow till April or May.

5. The manner of sowing. — They sometimes sow in the spot where the young mulberry is to grow for the first three years; but they prefer sowing them in boxes about three feet long, and nine inches deep. The reason assigned is, that they are more easily watered and sheltered against frost. They remove them from the boxes into rows in a nursery, which is done without injury to the roots, by taking off one of the sides of the box. Rozier remarks upon the practice of rubbing the berries on a hair rope and then burying it in the earth, that it is an useless complication of labor.

The French seem to be in the constant practice of grafting their mulberries. No satisfactory reason seems to be assigned for this certainly expensive process; but as they are very familiar with the cultivation, no doubt experience must have shown them an advantage, or the French, being habitual economists, would not have adopted it.

It was formerly the practice in France to plant out the mulberry as standards, and to suffer them to attain a considerable size, taking care, however, so to manage the pruning as to keep all the limbs within the reach of gathering ladders. The practice is of late much changed. It was observed, says Rozier, that the young plants in nurseries put forth their leaves much sooner than the standard trees, and the necessity of obtaining early food for the young insects obliged the cultivators to provide themselves with a *certain number* of mulberries in the bush or shrubby state.

From these first experiments arose the prevalent practice of raising dwarf mulberries extensively, and also of surrounding their fields with mulberry hedges. It is said that the produce of an acre in dwarf mulberries is much greater than one in large trees, the distance between the plants being so much less, so that the number of dwarfs may be eight times as great. This is admitted to be true at first, but some cultivators deny that it continues to be so after the standard trees have attained their full size. The benefits of the dwarf cultivation are thus briefly stated:—1st. Women and children can gather the leaves without danger, and much quicker than the most experienced gatherers could on large trees. 2d. The proprietor is much more speedily repaid his advances. 3d. The dwarf mulberries put forth their leaves earlier, a valuable quality, as the more early the worms are produced the better. 4th. Dwarf trees will succeed in situations in which standards will not. 5th. Their leaves are quite as good as those of the others, but the leaves of young plants should be given to newly hatched worms, and those of the older to the more mature.

INFLUENCE OF SILK CULTURE ON HEALTH.

In urging upon the community, and especially farmers and their wives and daughters, to engage in the culture of silk, fidelity and good faith requires of us that we do not conceal the fact, that some antagonist writers on the subject, have maintained that the atmosphere of a cocoonery is

injurious to the human constitution, and the generator of disease and death. They have claimed, and truly, that the pestilential air of a cocoonery, when a close room is occupied as such, is deleterious to the health of the feeders, and especially to infants that are nursed by mothers or nurses thus employed. In proof of this they have said that for many years it was noticed that large numbers of infants died annually in the silk growing countries, particularly at Tiers, Narbonne, Castrie, &c. where multitudes of silk worms are fed by mothers; and hence they have concluded, and rationally, that the mother communicates a fatal disease to her infant in the impurities of the nutriment on which it subsists. It has also been remarked that simple wounds, whether on men or women thus employed, have become ulcers not only painful but incurable.

These disastrous consequences, which were formerly of frequent occurrence, have been carefully investigated, and their causes satisfactorily ascertained. It was found that they invariably occurred in the establishments of the opulent, while those of the poor were wholly exempt from them. In the poorest villages, where the crevices in the covering of the huts of the inhabitants furnished ample ventilators, large and certain crops were found to be made; while in the close covered dwellings of the rich, they were rarely found. In the huts of the poor it was found that the inmates were in good health, even to the infants, while the rich were diseased and their nurslings sick and dying.

These facts furnish the most indubitable evidence that both the worms and their attendant's will contract disease from the exhalations of the excrements and litter, if they be suffered to remain in a close room even for a few hours — and, on the contrary, they as satisfactorily prove, that if they be regularly and seasonably removed, and the room well ventilated, both will enjoy good health. It is wisely ordered in the economy of Providence, that cleanliness and pure air are as essential to the health of the worm as to the health of its attendant — and hence what contributes to the comfort and enjoyment of the one in like manner does to the other.

The preparation of food for the worm is certainly a very healthy employment; and, with no more care than is necessary for the health of the worm, the duties of the cocoonery may be made equally so. The French and Italian Culturists ridicule such an attempt to alarm them with fears on this subject; and Mr de Turk, speaking with respect to the culture of silk in Prussia says many who have been engaged in it have reached the age to which man ever attains. The same is true of the silk culturists in Bavaria. Unwilling, therefore, as we should be, to be instrumental in introducing a business which would require a commutation of health for wealth, we can without any misgivings, say, no person need be deterred from engaging in the culture of silk on account of the influence upon health.—*Silk Culturist.*

NATIVE SILK WORM.

If the statements contained in a work published in London in 1655, by John Streeter, entitled "The Reformed Virginia Silk Worm," &c., are entitled to credit, it would seem the forests of Virginia in the days of its infancy, were inhabited by a species or variety of the silk worm, of a very extraordinary character and habit. The book purports to contain the discovery, by a young English lady, in 1652, of a method of feeding silk worms, in the woods, on the mulberry trees, in Virginia, without shelter from the weather, or much assistance, protection or attention from the planters. From the description which the writer gives of the cocoon, and the various trees and shrubs on which the worm fed and made silk, we should think the account needed confirmation were it not known that the climate of Virginia is remarkably adapted to the constitution of the silk worm. That the worm in some parts of Virginia, as well as in China, will live in the open air, and make its cocoon upon the tree, we have no doubt; but we confess ourselves rather skeptical as to the size of the cocoons of which the writer speaks. If, however, there ever were silk worms of this character in the forests of Virginia, it is to be hoped that the race has not become extinct; and it is certainly worthy the attention of naturalists in that region to ascertain the fact. We give the writers description of the cocoon and habit of the worm in his own language and orthography, premising the remark that "silk bottome" is synonomous with cocoon.

"The Silk Bottome of the naturall Worme in *Virginia*, found there in the woods, is ten Inches about, and six Inches in length to admiration; and whereas ours in *Europe* have their Sleave and Loose Silke on the outside; and then in a more closer covering they intombe themselves. These rare Worms, before they inclose themselves up, fill with Silke, the great emptinesse, and afterwards inclose themselves in the middle of it, so they have a double Bottom. The loose Sleave Silk is all on the outside of this compass, for if that were reckoned in, the compass of the Bottom would far exceed this proportion; But this is sufficient to be the wonder of the whole World! to the glory of the Creator, and exaltation of VIRGINIA."—*Silk Culturist.*

LUCERNE.

To the Editor of the New England Farmer,—

Dear Sir:—In your last Farmer I noticed a communication from that distinguished agriculturist, Hon. Samuel Lathrop, of West Springfield, on Indian Corn, closing with an inquiry concerning Lucerne or French Clover. Desirous that this clover should be fairly tried in field culture, induces me to communicate through your valuable paper to him and the public, an experiment made in the year 1827, at the House of Industry Farm, South Boston. The land in front of the house was quite uneven, and to bring it into shape, it was resolved by the directors to raise the land in front of the house, and finish with a glacis of about two hundred and fifty feet in length, with a slope of about sixteen feet. This bank was made of a fine sandy soil, with a finish of free loam, not rich, with an intention of sodding, but finding it to be very expensive, it was resolved to try the lucerne, knowing it had a long tap root, which would probably preserve the bank from gullying out. It was prepared, and the seed sown in the latter part of May; soon after a high wind drifted the bank to such an extent, that the set was pretty much blown off; it was repaired and sown again about the 10th June, and watered; the seed soon came up, and did well. In October, roots of grass were pulled up, measuring thirty inches in length. It has been mowed since then five times a year, yielding a good crop. I have sown it since with wheat, which was a failure. I would recommend anyone who has a light, free alluvial soil, to try a little of it alone, as an experiment. In an adhesive, cold, wet, or stony soil, it should not be sown; but on the rich, free, alluvial soils of the Connecticut, much may be expected from it; the great secret being a freeness in the soil, to accommodate the tap root, which will enable it to stand the drought. I know of no grass that will give the yield, (where it is suited to the soil,) or is more satisfactory to the sight of man, or the taste of beast, than a field of Lucerne Clover. Yours, with respect, B. V. F.

Churning Butter.—*Mr Holmes:* As your paper is intended as a medium to spread abroad everything useful to farmers, and ladies or dairy women in their several occupations, I am led through it to communicate a fact accidentally discovered by me, relative to the churning of butter, which I have heretofore found a laborious job in winter. I set some frozen cream in a tin vessel on my fire-frame one night — the next morning I found the cream full as warm as milk when first taken from a cow. On placing it in the churn it required not more than two minutes churning before the butter come, as we say. To show that this was not a solitary instance, I have ever since placed my cold and frozen cream in a vessel, and so placed it as that it should slowly become as warm as above named, when not once only, but uniformly the same result has taken place. Let anyone who is desirous try this mode, and my word for it, they will find the above verified, which does away the fatigue of a long and some times doubtful churning. If the cream is moderately warmed to the extent named, I will warrant the result to be as above.—*Correspondent of the Maine Farmer.*

Printing.—The most extensive printing establishment in England at the present time, is that of the 'Society for the Diffusion of Useful Knowledge.' It gives regular employment to thirtysix type founders, seven men damping paper, and one hundred and sixty compositors. Besides fifteen common presses, two steam engines are employed in driving eighteen printing machines, which can throw off from seven hundred to one thousand impressions each per hour. There are in the establishment about one thousand works in stereotype, among which are seventyfive different sets of plates for the Bible. The first cost of these plates was not far from $1,500,000.

Oil.—The New Bedford Mercury contains a statement of the quantity of oil imported in the year 1835, at the different ports of the United States, amounting to 172,683 barrels of Spermaceti, and 120,649 barrels of Whale oil. The import at New Bedford amounted to 84,966 barrels Sperm, and 49,764 Whale; at Nantucket 39,735 Sperm, 4,710 Whale; New London 10,585 Sperm, and 14,750 Whale, and the residue at 22 different ports.

The Mercury mentions a sale of 1300 barrels Sperm Oil in that town, at 90 cents per gallon.

The whole number of deaths in Boston for the past year, was 1914, of whom 208 died of consumption, 141 of lung fever, 188 of measles, 73 of typhus, 37 of intemperance, hanged 7.

NEW ENGLAND FARMER.

BOSTON, WEDNESDAY EVENING, JAN. 20, 1836.

ADDRESS OF GOV. EVERETT.

This excellent document has been for some days before the public, and met with the sanction of general approbation. The address is conciliatory, but decided in all points of importance to the common weal. It contains no diplomatic ambiguity, — evinces no disposition to evade responsibility; and those who may not in all things concur with the opinions of his Excellency can not fail to be pleased with the plain, lucid and forcible manner in which his views are expressed.

It is observed in this Address, that "By a law passed 31st March, 1834, imprisonment for debts contracted subsequent to July 4th, 1834, is abolished. With respect to debts contracted prior to that date it subsists as provided, by other laws," &c. His Excellency is of opinion that the abolition of imprisonment for debt should include cases prior as well as those subsequent to the date above mentioned, and observes that "It was laid down, in the clearest terms, by the Supreme Court of the United States, in an opinion delivered by its late venerable Chief Justice, that the remedy is no part of the contract;" and assigns other reasons for his belief "that it is expedient to perfect the work of humanity and justice already begun by an entire abolition of imprisonment for debt."

His Excellency is in favor of preserving and improving the militia system, and says, "The evils likely to result from its being broken down in the public estimation, are of the gravest character." As relates to slavery, he believes that "a conciliatory forbearance with regard to this subject, in the non-slaveholding States, would strengthen the hands of a numerous class of citizens at the South who desire the removal of the evil." But it is not necessary for us to recapitulate topics, which can not well be abridged, nor so well expressed by any change of phrase as they were in the document referred to, and which is, or should be, in the hands of much the greater part of our readers. We will, therefore, conclude our notice of the Address, by extracting the part which relates to Silk Culture, which may be useful as a text for future discourses.

"In the month of April last, a law was passed, 'to encourage the reeling and throwing of silk.' It provided that any person who shall reel or cause to be reeled, or throw or cause to be thrown, in the Commonwealth, from cocoons produced from silkworms raised in Massachusetts, merchantable silk capable of being manufactured into the various silk fabrics, shall be entitled to a bounty of fifty cents for every pound of silk thus reeled or thrown. It has been represented that the terms on which this bounty is offered, render it nearly, if not quite, inoperative. If it be the design of the Legislature to encourage in this way the attempts made to introduce this important branch of industry into Massachusetts, the law for that purpose will probably require revision. There are good grounds for the opinion that the manufacture of silk will become one of the greatest interests of Massachusetts.— It originated in the remotest antiquity, in a region whose climate under the same parallels of latitude, and local circumstances, is similar to ours. This consideration, with the experiments already made in the culture of the Chinese mulberry and the raising of the silkworm, furnishes much reason to believe, that the climate of New England will prove pecularly favorable to both. The adaptation of the requisite machinery for reeling, and other processes of the manufacture, open a field for the exercise of that mechanical ingenuity, which is a marked characteristic of our citizens. Should the anticipation warranted by these circumstances be happily realized, silk will become a staple product of the country, both for consumption and exportation, second to no other as a branch of industry and a source of wealth."

ON THE MANAGEMENT OF COWS KEPT FOR THE DAIRY.

It is essential that cows for milk should be at all times kept in high health and good condition. If they are allowed to fall off in flesh during winter, an abundant supply of milk need not be expected by bringing them in high condition in summer. Warm stables, as well as well ventilated, should be provided for them, as beasts will not require so much food when kept warm as when shivering with cold.

Mr Loudon says, "The time cows should become dry in Spring is not agreed on, some contending that they may be milked almost to the time of their calving without injury; while others maintain that it is absolutely necessary they should be laid dry from one to two months, both for the advantage of the cows and the calves. It is probable that much in this business depends on the manner in which they are kept; as where they are well fed they may be continued in milk till within a week or two of calving, without suffering any injury whatever from it, but in contrary circumstances it may be better to let them run dry for a month, six weeks or more, according to their condition, in order to their more fully recruiting their strength. It appears not improbable that the longer milking is continued, the more free the cows will be from indurations and other affections of the udder; which is a circumstance deserving of attention.— Where only one or two cows are kept for the supply of a family, it is useful to know that by good feeding they may be continued in milk without any bad consequences till nearly the time of calving."

In the last edition of Willich's Encyclopedia, it is said that "inflamed teats should be washed with two drachms of sugar or lead in a quart of water. Should tumors appear, apply a common warm mush of bran with a little lard. And to prevent cows from sucking their own milk, we are informed that rubbing the teats frequently with the most fœtid cheese that can be procured has proved an effectual remedy."

MASSACHUSETTS HORTICULTURAL SOCIETY.

Saturday, Jan. 16.

EXHIBITION OF FRUITS.

PEARS —From R. Manning, Salem, Catillac, a Baking Pear — Glaux Morceau, a tolerable eating Pear — Passe Colmar, a first rate Pear, which every lover of horticulture who has a garden should have.

Samuel Downer, Dorchester, Bezi Vaet.

APPLES.—John W. Foster, Portsmouth, a fine seedling Apple.

Dr O. Fisk, Worcester, Quince Apple — a good Apple.

R. Kittridge, Portsmouth, eight kinds — No. 8, Gardner's Sweeting; the others (names unknown), all of medium quality.

R. Manning, Salem, Danvers Sweet — a good baking Apple; Ribston Pippin, English origin — medium; Conway, a fine Apple; Boxford Apple, past eating, or worthless; Ortley Pippin, excellent; Pickman Apple, good; Lyscom Apple, good; and Bell Flower, a fine juicy Apple. For the Committee,

B. V. FRENCH.

HOW TO MAKE A PENNY.—A very comfortable improvement in one branch of our manufactures has recently been adopted, which is, in lining shoes with fur, in imitation of the French. A large dealer in the article states that the hides of young lambs — the very youngest — may be used for this purpose to excellent advantage; and desires to extend the information for the benefit of country lads. A large number of lambs die every spring, and have hitherto been an entire loss; but now for each skin when taken off, 12 1-2 to 17 cents may be obtained. Our industrious young friends in the country will doubtless engage in this 'speculation.'—*Newburyport Herald.*

A FIRST RATE HATCHER.—A Poughkeepsie paper states, that Miss G. P., of Dutchess county, N. Y. has this season obtained from 12 hens, 72 dozen eggs, and 105 chickens. Her management was by copious feeding to induce all the hens to lay whenever she wished them to, instead of setting, and to place the chickens under the care of one hen in a coop. Miss G. P. is equal to an Egyptian oven. What a prize such a girl would be to any husband that delights in a numerous progeny!— *Barre Gaz.*

GREEN OLD AGE.—Mr Eliphalet Hatch, of Southampton, is 91 years of age, and his wife a few months older. They have lived together almost 70 years. He is a blacksmith, and has labored at that trade 75 years. He labored some at that and other business the last summer. This winter he gets into his sleigh and drives four or five miles without difficulty. He stands erect, and walks *uprightly*, and always has, in the best sense of those words.—*Barre Gaz.*

SIMPLE CURE FOR RHEUMATISM.—Boil a small pot full of potatoes, and bathe the part affected with the water in which the potatoes are boiled, as hot as can be applied, immediately before getting into bed. The pain will be removed, or at least greatly alleviated by next morning. The most obstinate rheumatic pains are known to have been cured by one application of this novel and simple remedy.—*Scotsman.*

A VETERAN.—The Columbia, (S. C.) Times gives an account of a veteran, aged 99 years, who recently visited that place with a pair of horses, which he had brought from Columbia. He was in the battles of Bunker's Hill, Cowpens, Horse Shoe, Savannah, Eutaw, and six or seven others, and was wounded five times. He enjoys a pension of ninetysix dollars; for writing out the papers to obtain which, he paid a lawyer one hundred. He is a hale and hearty old fellow, having ridden several hundred miles on his horse dealing speculation.

MASSACHUSETTS OX.—There is exhibiting at the Exhibition Room in Flagg Alley, a mammoth ox of the native breed. He is six years old, and his weight is computed to be three thousand three hundred pounds. The ox was raised in Somerset, on Mr Slade's farm, and is altogether a beautiful and rare animal.

The Saratoga Sentinel says, that a brilliant reflection in the horizon, produced by the late fire in New York, was seen for some hours by several individuals residing on the Greenfield heights, nearly 200 miles distant from the conflagration.

The imports of Flour into this city for the last four months of 1835, were 181,958 barrels. During the same period in 1834, the imports were 211,189 barrels, and in 1833, 216,493 barrels.

190,879 barrels of Mackerel were inspected in this Commonwealth the last year.

PLUMBAGO.—An inexhaustible mine of Plumbago has been discovered in Hillsborough, N. H. This is the material, which, when properly prepared, is cut into our fine lead pencils. It is also used for various other purposes.—*Albany Daily Journal.*

The New Yorkers are about forming a volunteer corps, for the defence of their city and harbor in the event of a war with France.

Much destruction was occasioned by the late storm, among the fruit trees, far into the interior of N. H., in consequence of the ice gathering upon the branches, and heavy winds threshing them about.

A whale about 60 feet long, made its appearance a few days since in Oyster Bay harbor, L. I.

BRIGHTON MARKET,—MONDAY, JAN. 18, 1836.

Reported for the Daily Advertiser & Patriot.

At Market 640 Beef Cattle, 1160 Sheep. And 50 Beef Cattle reported last week. About 50 Beef Cattle and several lots of Sheep remain unsold at the close of the market.

PRICES—*Beef Cattle*—The market continues without any material change. We quote to conform to our last quotations, viz. a few extra at 36s and a few at 34s 6d prime at 31s 6d a 33s; good at 28s 6d a 30s; small cattle 21s a 25s 6d.

Sheep—The large number at market for the season has caused prices to decline; nearly all were stall fed several lots were very fine. We quote a few ordinary pelt sheep at 11s. Lots were taken at 15s, 18s, 21s, 27s, 30s, 33s, and 36s. A small number extra at about $10 each.

Swine—None at market.

SPLENDID FLOWER BULBS FOR WINTER.

WILL FLOOM IN THE HOUSE.

HYACINTHS—
Boquet Tendre,
Groot Voorst,
Parquin,
Grand Monarche,
Orondates,
Voltaire,
Temple of Apollo,
Lord Wellington,
Madam Zoutman,
Madam Van Murkeys,
Gloria Florum,
L'Ami Du Cœur,
Pyramides des Roses.
200 Assorted Double.
200 Assorted Single, &c. &c.

Amaryllis (*most splendid flowering.*)
Gladiolus Pscitticinna.
Polyanthus Narcissus.
Crocus.
Double Jonquills.
Single do.
Crown Imperial (*of varieties.*)
Frittellera.
Colchicum.
Cyclamens.
Tulips, (assorted,) &c. &c.
ALSO—A large collection of splendid varieties of FLOWER SEEDS.

These are to be received by the *Vanella*, from Holland, and will be ready for sale as soon as she comes up from Gloucester, where she put in.

It being late in the season, and having a very large collection on hand, the above will be sold unusually low.

GEO. C. BARRETT.

WANTED A SITUATION

As Gardener, a steady, active man, who is conversant with every department of the business, and has lived for some years in some of the most respectable places in Massachusetts, and will be highly recommended by his former employers. Any commands directed to T. L. G., care of Mr P. Mooney, Book Store, Federal Street, will be respectfully attended to. January 5th, 1836.

NEW VARIETY OF BARLEY.

For sale a few bushels of superior German Barley, without hulls, weighs 60 lbs. to the bushel, and will be found a great acquisition to the cultivator. Price $1 per peck.

Jan. 6 G. C. BARRETT.

GREEN HOUSE GLASS.

Of superior thickness for sale by LORING & KUPFER No 10 Merchants Row. 3m Jan. 6 1836.

SEEDS AT NEW ORLEANS.

AMOS B. BASS has for sale, at New Orleans, Boxes of Garden Seeds for dealers, small boxes do, do, for family gardens, of the growth of 1835. Dec. 30

FINE EARLY PEAS.

Earliest Dwarf Peas—the earliest variety of Peas, grown from 20 to 24 inches high—consequently require no sticks.

Early Washington Peas; a very *productive* early variety.
" Charlton " Early Golden Hotspur, do.;
Bishop's Early Dwarf, do.; very Dwarf and early.

ALSO—Dwarf Scymetar Peas—A new variety from Scotland; this Pea will be found a great acquisition for a very productive and delicious *late* sort

Dwarf Blue Imperial Pea;
Large Dwarf Marrowfat, do.; &c. &c.

All the above were raised expressly for the NEW ENGLAND SEED STORE, Nos. 51 & 52, North Market Street.

A VALUABLE FARM FOR RENT,

THE Farm lately occupied by Doct. Seth Millington, dec'd. about one mile from the town of St. Charles The Land is first rate, and in good order for cultivation. There are two orchards of choice variety of fruits, embracing many kinds of cider and keeping Apples—there are in all about 3000 fruit Trees; there is also an orchard and edge of white Mulberry Trees, 2000 in number, in excellent order for rearing silk worms—[it is proven that this climate is well adapted to the growing of silk. There are about sixty acres in these orchards. There are about twenty acres in good timothy meadow, about forty acres of excellent pasture adjacent to the Mill, and about fifty acres of other land for farming purposes. There is on the farm a valuable Ox Tread Mill, which is capable of grinding 40 or 50 bushels of corn or wheat in a day—the mill will be leased together with ten oxen. The buildings are a capacious dwelling house; a good barn, stable, kitchen, and other out houses. There is also on the farm a valuable mine of superior Stone Coal, capable of supplying any quantity—two shafts have already been sunk. The farm may be leased entire, or divided in such manner as will best suit tenants, for one year, or term of years, apply at this office or to J. M. MILLINGTON, Adm'r.

St. Charles, Mi. sept 19 of Seth Millington dec'd.

VALUABLE NEW WORK ON SILK

American Silk Grower's Guide, is this day published at the office of the New England Farmer—being the art of growing the Mulberry and manufacture of Silk on the system of successive crops each season—by WM. KENRICK, author of the New American Orchardist; 112 pp. price 42 cents, neatly bound in cloth. Booksellers and traders supplied on favorable terms. GEO. C. BARRETT.

HAY and COTTON PRESS

The subscriber respectfully offers to the public a new and useful Machine for Pressing Hay, Cotton, Hops, Cider, and all compressible commodities, which he has recently invented and which for power, utility and cheapness, he can recommend to their use.

The advantage this Machine has over all others that have been introduced is, it is capable of producing double the power without injury to the machinery.

That is there are two shafts that convey the power to the commodity to be pressed, instead of one; and the machinery being fixed to both, operate equally. The Machine may be constructed to operate with cogs or chains pressing down or up, or both at the same time. The subscriber has a machine in successful operation, which is said by good judges to exceed anything yet introduced for pressing hay. The subscriber has secured Letters Patent for the above invention and is now ready to dispose of rights for States Counties or Towns.

Any information respecting said Machine may be had by calling on Dame, Baker and Clement of Gorham, Cumberland county Maine. SAMUEL T BAKER.

This certifies that we the undersigned having seen and used the above Press do not hesitate to say that in our opinion for cheapness of construction, power and utility, it is far superior to anything yet introduced.

Rev. James Lewis, Moses Fogg,
S. C. Clement, Postmaster, Col. Samuel Stephensen,
Daniel Baker, Esq. Jacob S. Smith, Esq.
Capt. Robert Johnson, Wm. E. Files, Town Rep.
J. C. Baker.

GORHAM, Nov. 11, 1835. eow3m

FARM TO LET IN MEDFORD

About 5 miles from Boston; containing 40 acres of excellent Land, well adapted to mowing, tillage and pasturage, Said farm has been heretofore improved as a milk farm.

Apply to Luther Angier, near Medford Bridge.

N. B. Adjoining the above farm is about the same number acres, of similar land, which may be had on application to NATHAN ADAMS, Esq.

Medford, Nov. 26, 1835. tf

COMPLETE SET OF THE FARMER

FOR sale at this office, one complete set of the New England Farmer comprising twelve volumes, neatly and well bound and perfect. Price $3 25 per volume, *cash*. Nov. 25.

PRICES OF COUNTRY PRODUCE.

CORRECTED WITH GREAT CARE, WEEKLY.

		FROM	TO
APPLES, Russetts and Baldwins.	barrel	1 50	2 25
BEANS, white,	bushel	1 50	1 75
BEEF, mess,	barrel	10 50	11 00
Cargo, No. 1.	"	8 50	9 00
prime,	"	7 00	7 25
BEESWAX, (American)	pound	25	27
BUTTER store, No. 1,	"	18	21
CHEESE, new milk,	"	8	9
FEATHERS, northern, geese,	"	46	50
southern, geese,	"	42	45
FLAX, American,	"	9	10
FISH, Cod,	quintal	2 75	2 83
FLOUR, Genesee, cash	barrel	7 62	7 75
Baltimore, Howard street,	"	7 62	7 75
Baltimore, wharf,	"	7 37	7 50
Alexandria,	"	7 50	7 62
GRAIN, Corn, northern yellow	bushel	1 05	1 08
southern flat yellow	"	98	91
white,	"	86	91
Rye, northern,	"	1 05	1 06
Barley,	"	90	1 00
Oats, northern, (prime)	"	61	62
HAY, best English, per ton of 2000 lbs		22 00	25 00
eastern screwed,	"	21 00	23 00
hard pressed,	"	21 00	23 00
HONEY,	gallon		
HOPS, 1st quality	pound	13	14
2d quality	"	10	11
LARD, Boston, 1st sort,	"	12	13
southern, 1st sort,	"	11	12
LEATHER, slaughter, sole,	"	19	20
do. upper,	"	12	14
dry hide, sole,	"	19	21
do. upper,	"	18	20
Philadelphia, sole,	"	27	29
Baltimore, sole,	"	25	27
LIME, best sort,	cask	1 06	1 10
PLASTER PARIS, per ton of 2200 lbs.		3 12	3 37
PORK, Mass. inspect. extra clear,	barrel	22 00	23 00
Navy, mess	"		
bone, middlings, scarce,	"		
SEEDS, Herd's Grass,	bushel	2 25	2 50
Red Top,	"	75	90
Red Clover, northern,	pound	10	11
SILK COCOONS, (American)	bushel		
TALLOW, tried,	cwt.	8 50	9 00
WOOL, prime, or Saxony Fleeces,	pound	65	75
American, full blood, washed,	"	55	65
do. 3-4ths do.	"	55	58
do. 1-2 do.	"	50	50
do. 1-4 and common	"	40	45
Native washed	"	38	60
Northern pulled, Pulled superfine,	"	58	60
1st Lambs,	"	50	53
2d do.	"	40	41
3d do.	"	30	35
1st Spinning,	"	48	50

Southern pulled wool is generally 5 cts. less per lb.

PROVISION MARKET.

RETAIL PRICES.

HAMS, northern,	pound	12	12
southern, and western,	"	11	12
PORK, whole hogs,	"	8	9
POULTRY,	"	10	14
BUTTER, (tub)	"	18	20
lump	"	22	25
EGGS,	dozen	25	28
POTATOES,	bushel	30	50
CIDER,	barrel	1 75	2 00

MORUS MULTICAULIS.

JOSEPH DAVENPORT, of Colerain, Mass. offers for sale 16,000 trees of the Morus Multicaulis, or Chinese Mulberry, being a part of his trees cultivated at Colerain and at Suffield, Ct., 16 miles north of Hartford, one mile from the river. The trees are from 2 to 5 feet high. Price according to size, from 25 to 30 dollars per hundred. Were propagated from trees that endured the last severe winter unprotected. Purchasers will be furnished with a knowledge of its culture and suitable soil, which, if attended to will ensure it without protection against the severity of our climate. Trees will be carefully packed and forwarded by land or water to any part of the country. Orders received by mail will receive prompt attention. Colerain, Oct. 5, 1835

TEAZLE SEED.

Just received 50 lbs. prime Teazle Seed. The importance of this crop merits the attention of agriculturists.

Dec. 16. G. C. BARRETT.

MISCELLANY.

[Communicated.]

There's nothing new beneath the sun,
Said the wise king Solomon;
But had he lived at later date,
And heard some anecdotes of late,
What would he think on hearing first
Of fattening Hogs with saw-mill dust?
Would he not say, excepting one
There's nothing new beneath the sun?
Yet on inquiring might have heard
'T was not so new as first appeared.
It had been tried in days of yore
Some sixty years ago, or more,
A certain wight was passing by
A saw-mill, saw the saw dust lie,
A splendid pile so bright and new
He asked what use they put it to.
For feeding swine was the reply
By one who then was standing nigh,
Mixed with grain 'tis precious food
There's nothing better, if so good.
Freely fed for three or four weeks
The fat will swell their chubby cheeks,
Their eyes will seem deep sunk between,
They 'll neither see nor can be seen.
They 'll grow too heavy for their feet
And squat upon their hams to eat.
He bought a load and off he jogs
To fix a supper for his hogs—
He watched their progress many days,
And tried their food as many ways,
He scalded some, but never saw
It differed aught from feeding raw,
Roasted or baked or boil'd or stew'd,
He could not find did any good.
One process yet he had not tried,
And caused a bushel to be fried,
He persevered but less and less
Of dust he mixed with every mess,
When out at last the secret came,
And he immortalized his name,
Just in proportion to the grain
He mixt with dust, his swine would gain.

HORRID SPECTACLE.—There was, however, in the midst of our festivities, a great drawback from the pleasure we should otherwise have enjoyed. I allude to the unfortunate Blackfeet who had been captured by the Flatheads. Having been informed that they were about putting one of their prisoners to death, I went to their camp to witness the spectacle. The man was tied to a tree; after which they heated an old barrel of a gun until it became red hot, with which they burned him on the legs, thighs, cheeks and belly. They then commenced cutting the flesh from about the nails, which they pulled out, and next separated the fingers from the hand, joint from joint. During the performance of these cruelties, the wretched captive never winced, and instead of sueing for mercy, he added fresh stimulants to their barbarous ingenuity, by the most irritating reproaches, part of which our interpreter translated as follows:

"My heart is strong. You do not hurt me. You can't hurt me. You are fools. You do not know how to torture. Try it again. I do not feel any pain yet. We torture your relations a great deal better, because we make them cry out loud like little children. You are not brave—you have small hearts, and you are always afraid to fight."

Then addressing one in particular he said, "It was by my arrow you lost your eye?"—upon which the Flathead darted at him, and, with a knife, in a moment scooped out one of his eyes; at the same time cutting the bridge of his nose nearly in two.

This did not stop him: with the remaining eye he looked sternly at another, and said, "I killed your brother, and I scalped your old fool of a father."

The warrior to whom this was addressed, instantly sprang at him, and separated the scalp from his head. He was then about plunging a knife in his heart, until he was told by the chief to desist. The raw skull, bloody socket, and mutilated nose, now presented an horrific appearance, but by no means changed his tone of defiance.

"It was I," said he to the chief, "that made your wife a prisoner last fall. We put out her eyes; we tore out her tongue; we treated her like a dog. Forty of your warriors"——

The chieftain became incensed the moment his wife's name was mentioned; he seized his gun, and before the last sentence was ended, a ball from it passed through the brave fellow's heart, and terminated his frightful sufferings.—*Cox's Adventures.*

SINGULAR ANECDOTE OF A DOG.—A gentleman now residing in London, whilst travelling outside of one of the north mails, was witness of the fact I am about to relate. It was a dark night, and as the mail was travelling at the usual rate a dog barked incessantly before the leaders, and continued to do so for some time, jumping up to the heads of the horses. The coachman, fearful of some accident, pulled up, and the guard got down to drive the animal away. The dog ran before the guard, and then returned to him, making use of such peculiar gestures, that he was induced to take out one of the lamps and follow the dog. After doing so for one hundred yards, he found a farmer lying drunk across the road, and his horse grazing by the side of it. But for this extraordinary sagacity and affection of the dog for his master, the coach would most probably have been driven over the body of the sleeping man.

INHABITANT TREE.—Along the base of these mountains is a large tree, containing seventeen conical huts. They are used as dormitories, being beyond the reach of the lions, which since the incursion of the Mantatees, when so many thousands of persons were massacred, have become very numerous in the neighborhood and destructive to human life. The branches of these trees are supported by forked sticks or poles, and there are three tiers or platforms on which the huts are constructed. The lowest is nine feet from the ground, and holds ten huts; the second about eight feet high, and the upper story, if it may be so called, contains four. The ascent to these is made by notches cut in the supporting holes, and the huts are built with twigs, thatched with straw, and will contain two persons conveniently.—*Stedman's Wanderings in South Africa.*

Julius Cæsar, the hero of fifty pitched battles, was the son of a bondwoman, and rose from the ranks.

Seeds for 1836.

FOR sale a the Seed Store connected with the N. E Farmer Office

200	bushels	finest Early Peas;
200	"	Large Marrowfat do;
50	"	Dwarf Blue Imperial do.;
50	"	other varieties;
100	"	Best Garden Beans;
	"	Dwarf and Pole, Early and Late, do;
500	lbs.	superior Long Blood Beet Seed;
100	"	Early Turnip " " "
300	"	Cabbage Seed, 14 different kinds;
250	"	Fine Long Orange Carrot;
50	"	Early Horn, do.;
200	"	Common Cucumber;
150	"	Long Green, do.;
100	"	Early and Head Lettuces;
50	"	Pure White Portugal Onion;
500	"	Silver Skin "
1000	"	Large Deep Red, "
200	"	Large Dutch Parsnip;
150	"	Early Scarlet Short Top Radish;
100	"	Long Salmon;
50	"	Turnip Radishes;
50	"	Spinach;
100	"	Early Scollop Squash;
100	"	" Long "
100	"	Long Winter, do;
25	"	Salsafy;
100	"	Early White Dutch Turnip;
500	"	English
200	"	Ruta Baga,
200	"	Mangel Wurtzel *for Cattle.*

Also—Cauliflower; Broccoli; Celery; Cress; Egg Plants Leek; Endive; Musk and Water Melons; Martynea; Pepper; Parsley and Tomato Seeds by the lb. or oz. *Herb Seeds*, of all kinds.

50,000 Papers in 200 to 300 splendid kinds of *Annual, Biennial* and *Perennial* FLOWER SEEDS.

GRASS SEEDS, *Wholesale & Retail.*

The above comprises in part the stock of seeds raised expressly for the establishment, and the quality and goodness will be *warranted* superior to any ever offered heretofore. Dealers and others will please file in their orders immediately, and they shall be faithfully executed for the spring.

Boxes of Garden Seeds for the country trade, neatly papered up, with directions on each paper, for sale at a large discount from Market prices.

FRUIT & ORNAMENTAL TREES, &c. will be supplied in the spring, and orders are solicited.

GEO. C. BARRETT, *Agricultural Warehouse.*

WANTED.

A good capable Man with a Wife, is wanted to go to Illinois and take charge of a farm—also four or five good men for assistants; liberal compensation will be paid, with all necessary expenses for the journey, for terms please apply to Grigg's & Weld, Boston. Letters post paid will receive immediate attention. ew6w Jan 5

SEEDS.

H. L. HOFFMAN, Druggist, St. Louis, has for sale a large and very superior collection of Garden and Flower Seeds, put up at the New England Agricultural Warehouse. Dec. 30

SEEDS IN FLORIDA.

ELIAB STONE BREWER, Apalachicola, has for sale, boxes of assorted Garden Seeds, of a superior quality put up at the N. E. Seed Store, Boston. Dec. 30

THE NEW ENGLAND FARMER

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